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REMARKS

The application has been reviewed in light of the Office Action dated September 26, 2006. Claims 21, 24, 27, 30 and 44-57 were pending, with claims 1-20, 22, 23, 25, 26, 28, 29 and 31-43 having previously been canceled, without prejudice or disclaimer. By this Amendment, claims 21, 44, 47, 51 and 53 have been amended to clarify the claimed subject matter, claims 55 and 56 have been canceled, without prejudice or disclaimer, and new claims 58-66 have been added. Accordingly, claims 21, 24, 27, 30, 44-54 and 57-66 are now pending, with claims 21, 44, 47, 51, 58 and 63 being in independent form.

Claims 21, 24, 27, 30 and 44-50 were rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite.

In response, the claims have been carefully reviewed and amended with particular attention to the points raised in the Office Action. Withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

Claims 51-57 were rejected under the judicially created doctrine of obviousness-type double patenting as purportedly unpatentable over claims 2, 4, 6, 7, 9, 11, 13 and 14 of U.S. Patent No. 6,592,958 to Nakamura et al. Claims 51-57 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as purportedly unpatentable over claims 1-14, 17-25 and 27-32 of copending U.S. Application No. 09/996,171 (Publ. No. 2002/0110063).

A Terminal Disclaimer is submitted herewith, thus obviating the double patenting rejection based on claims 2, 4, 6, 7, 9, 11, 13 and 14 of U.S. Patent No. 6,592,958. A check covering the \$130.00 statutory disclaimer fee is enclosed herewith.

Regarding the provisional rejection based on claims 1-14, 17-25 and 27-32 of co-pending U.S. Application No. 09/996,171, it is noted that co-pending U.S. Application No. 09/996,171 is

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under a final rejection and no indication of allowability has been received. Accordingly, Applicant maintains that no additional action is required in response to the provisional rejection based on claims 1-14, 17-25 and 27-32 of co-pending U.S. Application No. 09/996,171.

Claims 51-57 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over U.S. Patent No. 6,169,722 (Kikukawa '722). Claims 51-57 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over U.S. Patent No. 6,465,070 (Kikukawa '070).

The Office Action also acknowledged that claims 21, 24, 27 and 30 of the present application are entitled to the priority date of January 12, 2001, claims 44-50 of the present application are entitled to the priority date of March 1, 2001, and claims 51-57 of the present application are entitled to the priority date of January 21, 2001.

U.S. Patent No. 6,465,070 issued to Kikukawa et al. from U.S. application Serial No. 09/760,847 filed January 17, 2001. Therefore, the effective reference date of Kikukawa '070 as a Section 102(e) reference is January 17, 2001. Since the January 17, 2001 reference date of Kikukawa '070 is after the January 21, 2001 priority date of claims 51-57, Kikukawa '070 is not prior art to claims 51-57 of this application.

Kikukawa '722, as understood by Applicant, proposes a sample recording layer having the composition of $\text{Ag}_6\text{In}_4\text{Sb}_{62}\text{Te}_{28}$. Kikukawa '722 also suggested that Ge may be added in addition in an amount in the range of 0 to 2 at %. Thus, the resulting composition has the following constitution $(\text{Ag}_6\text{In}_4\text{Sb}_{62}\text{Te}_{28})_{1-x}\text{Ge}_x$, that is, ranging from $\text{Ag}_6\text{In}_4\text{Sb}_{62}\text{Te}_{28}\text{Ge}_0$ through $\text{Ag}_{5.88}\text{In}_{3.92}\text{Sb}_{60.76}\text{Te}_{27.44}\text{Ge}_2$.

Kikukawa '722, contrary to the contention in the Office Action, does not teach or suggest in Kikukawa '722 of an optical recording medium wherein the recording layer essentially consists of $\text{Ag}_6\text{In}_4\text{Sb}_{64}\text{Te}_{24}\text{Ge}_{0.5-2}$.

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Moreover, Applicant does not find teaching or suggestion in Kikukawa '722 or Kikukawa '070 of a rewritable phase-change optical recording medium comprising a substrate, a recording layer containing at least materials capable of carrying out read/write/erase operations through phase changes of the materials therein, and a metal/alloy layer, wherein the recording layer essentially consists of Ag, In, Sb, Te and Ge, with a proportion in atomic percent of a(Ag): b(In): c(Sb): d(Te): e(Ge), with $0.1 \leq a \leq 7$, $2 \leq b \leq 10$, $64 \leq c \leq 92$, $5 \leq d \leq 26$ and $0.3 \leq e \leq 3$, provided that $a + b + c + d + e \geq 97$, and wherein the metal/alloy layer includes Al and at least one kind of additive with a content ranging from 0.3 weight percent to 2.5 weight percent, the additive being selected from the group consisting of Ta, Ti, Cr and Si (amended claim 51), or the metal/alloy layer includes Ag and at least one kind of additive with a content ranging from 0 to 4 weight percent, the additive being selected from the group consisting of Au, Pt, Pd, Ru, Ti and Cu (claim 58).

Claims 21, 24, 27, 30, 33, 36, 39, 42, 49 and 50 were rejected under 35 U.S.C. § 102(b) as purportedly anticipated by EP 0 717 404 (Yamada '404). Claims 21, 24, 27, 30, 49 and 50 were rejected under 35 U.S.C. § 102(b) as purportedly anticipated by EP 0 735 158 (Yamada '158). Claims 21, 24, 27, 30, 49 and 50 were rejected under 35 U.S.C. § 102(b) as purportedly anticipated by JP 3-240590 (Iwasaki '590). Claims 21, 24, 27, 30, 49 and 50 were rejected under 35 U.S.C. § 102(b) as purportedly anticipated by JP 4-078031 (Iwasaki '031). Claims 21, 24, 27, 30, 49 and 50 were rejected under 35 U.S.C. § 102(b) as purportedly anticipated by JP 11-070737 (Yuzurihara). Claims 21, 24, 27, 30, 49-54 and 57 were rejected under 35 U.S.C. § 102(a) as purportedly anticipated by JP2002-002116 (Miura '116). Claims 21, 24, 27, 30, 49 and 50 were rejected under 35 U.S.C. § 102(e) as purportedly anticipated by U.S. Patent No. 6,479,121 (Miura '121). Claims 21, 24, 27, 30 and 44-50 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over either Yamada '404, Yamada '158, Iwasaki '590 or Yuzurihara in view of U.S. Patent No.

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6,609,175 to Ando et al. and either EP 1 111 598 (Suzuki '598) or U.S. Patent No. 6,621,780 (Suzuki '780).

Regarding Miura '116, it is respectfully pointed out that Miura '116 was published January 8, 2002, many months after the January 12, 2001 priority date of claims 21, 24, 27 and 30 of the present application, March 1, 2001 priority date of claims 44-50 of the present application, and January 21, 2001 priority date of claims 51-57 of the present application, Kikukawa '070 is not prior art to claims 21, 24, 27, 30, 49-54 and 57 of this application.

Applicant submits that none of the remaining cited references (including Yamada '404, Yamada '158, Iwasaki '590, Iwasaki '031, Yuzurihara, Miura '121, Ando, Suzuki '598 or Suzuki '780) teach or suggest a rewritable phase-change optical recording medium comprising a substrate, a recording layer containing at least materials capable of carrying out read/write/erase operations through phase changes of the materials therein, and a metal/alloy layer, wherein the recording layer essentially consists of Ag, In, Sb, Te and Ge, with a proportion in atomic percent of a(Ag): b(In): c(Sb): d(Te): e(Ge), with $0.1 \leq a \leq 7$, $2 \leq b \leq 10$, $64 \leq c \leq 92$, $5 \leq d \leq 26$ and $0.3 \leq e \leq 3$, provided that $a + b + c + d + e \geq 97$, and wherein the metal/alloy layer includes Al and at least one kind of additive with a content ranging from 0.3 weight percent to 2.5 weight percent, the additive being selected from the group consisting of Ta, Ti, Cr and Si (amended independent claim 21 or 51), or the metal/alloy layer includes Ag and at least one kind of additive with a content ranging from 0 to 4 weight percent, the additive being selected from the group consisting of Au, Pt, Pd, Ru, Ti and Cu (new independent claim 58 or 63).

Independent claim 44 of the present application is directed to a phase-change optical recording medium comprising a recording layer which contains information recorded in advance therein corresponding to S and R values for selecting an optimum recording power.

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The cited art does not disclose or suggest a phase-change optical recording medium which includes such information (in name or in substance) stored therein.

The Office Action demonstrates a failure to understand the claimed invention. It is information corresponding to S and R values *for selecting an optimum recording power* that is recorded in advance therein, and the stored information is described in the claim.

Independent claim 47 is directed to a phase-change optical recording medium comprising a recording layer which contains information regarding a P_r value recorded in advance therein, the P_r value corresponding to an optimum recording power.

The cited art does not disclose or suggest a phase-change optical recording medium which includes such information (in name or in substance) stored therein.

Contrary to the contention of the Office Action, the claims do not claim the subject matter in product by process format. The description of acts to be performed is an explanation of the information recorded in the phase-change optical recording medium in advance.

Accordingly, for at least the above-stated reasons, Applicant respectfully submits that independent claims 21, 44, 47, 51, 58 and 63, and the claims depending therefrom, are patentable over the cited art.

In view of the remarks hereinabove, Applicant submits that the application is now in condition for allowance. Accordingly, Applicant earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any fees that may be required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.


If a telephone interview could advance the prosecution of this application, the Examiner is

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respectfully requested to call the undersigned attorney.

Respectfully submitted,


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